25. ON THE SYSTEMATIC STATUS OF THE SPECIES OF THE GENUS *DANIO* HAMILTON DESCRIBED BY BARMAN (1983, 1984, 1985)

The systematic status of *Danio* (*Brachydanio*) *horai* Barman (Barman 1983), *Danio* (*Danio*) *assamensis* Barman (Barman 1984) and *Danio devario* (Barman 1985) has been assessed based on the study of types and general material of these species. It has been ascertained that *Danio* (*Brachydanio*) *horai* is a synonym of *Brachydanio acuticephala* Hora. The description of *Danio* (*Danio*) *assamensis* by the original author (Barman 1984) has been found to be faulty and the species is, therefore, redescribed here. The material identified as *Danio devario* Hamilton by Barman (1985) does not belong to this species and it is certainly a case of misidentification.

INTRODUCTION

During the course of a revisionary study of Rasborinae, an examination of the systematic position of the various species of the genus *Danio* Hamilton was attempted and we came to the conclusion that the status of the new taxa of this genus described by Barman (1983, 1984, 1985) was of doubtful nature. *Danio* (*Danio*) *menoni* (Barman 1985), is, in fact an already known species, *Chela laubuca* Hamilton of the subfamily Cultrinae and hence, not of Rasborinae (Tilak and Jain 1987). The systematic status of *Danio* (*Brachydanio*) *horai* Barman, *Danio* (*Danio*) *assamensis* Barman and *Danio devario* Hamilton in the publications of Barman (1983, 1984, 1985) has been assessed on the basis of the study of type material of the new species and general material of *D. devario* and the results are given in this paper.

DESCRIPTION

A. SYSTEMATIC STATUS OF *Danio* (*Brachydanio*) *horai* BARMAN

Barman (1983) described a new species, *Danio* (*Brachydanio*) *horai* from Arunachal Pradesh. The new species is characterized by the absence of barbels and lateral line. Barman (1983) has tried to compare this taxon with *Brachydanio nigrofasciatus, B. rerio* and *B. choprae* which possess one or more pairs of barbels and the lateral line is incomplete; this was done to establish the identity of the new taxon. Barman (1983) did not compare his material with *B. acuticephala.* The type material of *B. horai* Barman (ZSI, FF. 1827 and paratype No. FF. 1828) has been examined by us and it has been found that the material belongs to *B. acuticephala* Hora which was originally described from Manipur by Hora (1921). Hora (1921), while describing this species did not make a mention about the absence, of barbels or lateral line in this species but subsequently, Hora and Mukerji (1935), while describing the fishes of Naga Hills recorded this species from that area and corrected the earlier mistake in its description by making a definite statement that the barbels and lateral line are totally absent in this species. The type material of *B. horai* resembles *B. acuticephala* in all details. It should therefore, be a junior synonym of the latter.

B. acuticephala Hora is a species distributed in Brahmaputra and Chindwin drainage systems (Hora and Mukerji 1935) and the streams of Arunachal Pradesh form a part of this drainage system of Brahmaputra river. This species is expected to occur in Arunachal Pradesh. The distribution of *B. acuticephala* Hora, is therefore, extended from Manipur and Naga Hills to Arunachal Pradesh.

B. SYSTEMATIC STATUS AND REDESCRIPTION OF *Danio (Danio) assamensis* BARMAN

Barman (1984) described a new species, *Danio (Danio) assamensis* from Assam, India. The type material of *Danio assamensis* Barman (ZSI, Holotype FF. 1861 and Paratype No. FF. 1862) has been examined and it has been observed that the description given by the original author (Barman 1984) contains errors of observation. It is a valid species, hence the species needs a detailed redescription, which has been done here, by studying the holotype and 1 example of the paratype. Barman (1984) has not included many morphometric characters which are important for the study of interrelationship of this species with other species of the genus.

Description:

Danio assamensis Barman B. III, D. II/12, A. II/16-17, P. 12, V. 8, C. 21, Lat. 1. 36, Lat. tr. 7-1/2/2-1/2. Barbels 4. Predorsal scales 16.

Dorsal profile more or less convex and ventral profile bow-shaped. Head triangular, directed upward. Head length 3.75-3.93 and depth of body 2.66-2.72 in standard length. Width of head 1.93-1.94 and snout length 3.82-4.00 in length of head. Eyes anterior with 2 spines, one small backwardly projecting process at anterior rim of the orbit and the other pointing forward above the anterior superior margin of the orbit. Eye diameter 3.37-3.47 in head length and 1.05-1.15 in inter-orbital width.

Mouth small, directed upward. Barbels 2 pairs, rostral pair half the eye diameter and maxillary ones minute at the junction of upper and lower jaw.

Lateral line complete, with 2½ scales between it and origin of pelvic fin.

Height of dorsal fin 4.89-5.20 and height of anal fin 5.65-6.48 in standard length. Length of pectoral fin 4.55-4.89 and length of pelvic fin 6.19-7.06 in standard length. Pectoral and pelvic fins provided with scaly appendages.

Predorsal distance 1.68-1.78 and postdorsal distance 2.26-2.32 in standard length. Preventral distance 2.03-2.06 and postventral distance 1.71-1.87 in standard length. Preanal distance 1.23-1.42 and postanal distance 2.62-2.96 in standard length. Height of caudal peduncle 1.64-1.66 in its length.

Coloration:

Two pale longitudinal bands extending from the opercular end to the base of caudal fin on each side. A black spot at the superior margin of the gill opening present. Fins without any colour markings.

Remarks:

Barman (1984) measured the standard length erroneously (69 mm instead of 65 mm in holotype and 62 mm instead of 60 mm in paratype), overlooked a spine on the superior anterior margin of the orbit and counted the lateral line scales incorrectly, showing 40-41 scales instead of 36. Based on his observations, Barman (1984) adjusted *D. assamensis* in an identification key based on the orbital spine and lateral line scales. Since the type material of *D. assamensis* has only 36 scales in the lateral line, it cannot be separated from those species, which have 32-36 scales in lateral line. Hence, the identification key should also be revised in the light of the present observations. The main point of difference between *D. spinosus* and *D. assamensis* on the one hand, and the rest of the species of the genus *Danio* on the other, is the presence of two orbital spines. *D. assamensis* can be further separated from *D. spinosus* based on the lateral line scales which are 36 in the former and 52 in the latter.

C.- SYSTEMATIC STATUS OF *Danio devario* HAMILTON EXAMINED BY BARMAN (1985)

While describing a new species, *Danio* (*Danio*) *menoni*, Barman (1985) wrote on *D. devario* that "Hamilton (1822) described *D. devario* from Indian waters without barbels, and subsequent workers like Day (1878) and Hora (1934) recorded this species with no barbels. During the course of my revisionary studies on the cyprinid genus *Danio*, out of hundreds of specimens of this species examined by me from different localities of India, not a single specimen was found without a pair of posterior or maxillary barbels." The observations recorded by Barman (1985) regarding the barbel in *D. devario* is very peculiar, because this species is never known to have barbels (Hamilton 1822, Day 1978, Hora 1934). During the course of study of fish fauna of various regions of the country, we have examined more than 200 specimens of *Danio devario* and find the barbels completely wanting in them. Tilak and Jain (1987) have already clarified the systematic position of *Danio* (*Danio*) *menoni* Barman which is, in fact, *Chela laubuca* of the subfamily Cultrinae. It is estimated, therefore, that the identification of *D. devario* of which hundreds of specimen have been examined by Barman (1985) is certainly wrong at the generic or subfamily level. The status of these specimens could be decided only if the material of *D. devario* studied by Barman (1985) is available for examination.

Since *D. devario* of Barman (1984, 1985) is based on misidentification, the adjustment of the species in the identification key given by him based on the presence of maxillary barbels, is faulty.

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